

PATENT APPLICATION

Xerox Docket No. D/A2447

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Frederique SEGOND et al.

Application No.: 10/065,443

Examiner: A. ARMSTRONG

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For: SYSTEM FOR LEARNING A LANGUAGE

BRIEF ON APPEAL

Appeal from Group 2600

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is Xerox Corporation, by way of an Assignment recorded in the U.S. Patent and Trademark Office beginning at Reel 013185, Frame 0362.

II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or that will directly affect or be directly affected by or have a bearing upon, the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-20 are on appeal.

Claims 1-20 are pending.

No claims are allowed, and no claims are objected to only for being dependent from a rejected base claim, but are otherwise allowable.

Claims 1-20 are rejected.

No claims are withdrawn from consideration.

No claims are canceled.

IV. STATUS OF AMENDMENTS

No Amendment After Final Rejection has been filed.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter of independent claims 1, 19 and 20 is directed to a system, method, and memory storing instructions, for implementing a learning system 106 that enables a user to learn a foreign language. The learning system 106 is on a network 102 by which multiple user systems 104 running the learning system 106 can interact and communicate (Fig. 1). The learning system 106 includes databases 118, a connection manager 120, and subsystems 117 (Fig. 1). Databases 118 include scenario database 134 (Fig. 1). Subsystems 117 include communication subsystem 124, virtual reality subsystem 126, and search subsystem 130 (Fig. 1).

In operation, scenarios stored in scenario database 134 can be played in user interface 200 (Fig. 2) in which users are represented by avatars (paragraphs [0039] and [0082] of the specification as filed). The connection manager 120 receives requests over the network 102 from the user systems 104 to connect and login to the language learning system 106 (paragraph [0033]). User profiles are stored in a session database 138 that specifies user preferences and interests. Users can use the learning system 106 together or alone (paragraph [0081]). A three dimensional representation of a physical setting is provided in frame 202 (Fig. 2; paragraph [0038]). Users can communicate with other users in the scenario, using a communication tool 210 of the communication subsystem 124 that establishes a communication channel between users (paragraph [0038]).

Regarding claim 1, the recited system finds support, for example, in the language learning system 106 (Fig. 1; paragraph [0032] of the specification as filed). The recited network finds support, for example, in the network 102 (Fig. 1; paragraph [0032] of the specification as filed). The recited memory for storing a scenario having tasks finds support, for example, in the databases 118 and more specifically in the scenario database 134 (Fig. 1;

paragraph [0033] of the specification as filed). The recited connection manager finds support, for example, in the connection manager 120 (Fig. 1; paragraph [0033] of the specification as filed). The recited user systems find support in the at least one user system 104 (Fig. 1; paragraph [0032] of the specification as filed). The recited virtual reality subsystem finds support, for example, in virtual reality subsystem 126 (Fig. 1; paragraph [0032] of the specification as filed). The recited physical setting in a user interface finds support, for example, in the frame 202 (Fig. 2; paragraph [0039] of the specification as filed). The recited communication subsystem finds support, for example, in communication subsystem / chat service 124 (Fig. 1; paragraph [0032] of the specification as filed). The recited at least one channel finds support, for example, in the communication tool 210 (Fig. 2; paragraph [0040] of the specification as filed). The recited text finds support, for example, in the text shown in the communication tool 210 (Fig. 2; paragraph [0040] of the specification as filed). The recited set of linguistic tools finds support in the linguistic services 230 (Fig. 2; paragraphs [0059]-[0073] of the specification as filed). The recited specified text finds support, for example, in the sentence "I went swim Saturday" (Fig. 2). The recited identified term finds support, for example, in the word "swim" 260 (Fig. 2; paragraph [0062] of the specification as filed). The recited search subsystem finds support, for example, in search subsystem 130 (Fig. 1; paragraph [0033] of the specification as filed). The recited information on the network finds support, for example, in the public, private, and semi-private domains (paragraph [0049] of the specification as filed), in the repositories (paragraph [0051] of the specification as filed), and in the subscription databases and community databases (Fig. 3). The recited example uses find support, for example, in paragraph [0072] of the specification as filed.

Regarding claim 19, the recited system finds support, for example, in the language learning system 106 (Fig. 1; paragraph [0032] of the specification as filed). The recited

network finds support, for example, in the network 102 (Fig. 1; paragraph [0032] of the specification as filed). The recited memory for storing a scenario having tasks finds support, for example, in the databases 118 and more specifically in the scenario database 134 (Fig. 1; paragraph [0033] of the specification as filed). The step of accepting connections finds support, for example, in paragraph [0044] of the specification as filed. The recited user systems find support in the at least one user system 104 (Fig. 1; paragraph [0032] of the specification as filed). The recited physical setting in a user interface finds support, for example, in the frame 202 (Fig. 2; paragraph [0039] of the specification as filed). The recited at least one channel finds support, for example, in the communication tool 210 (Fig. 2; paragraph [0040] of the specification as filed). The recited step of receiving and disambiguating an identified term finds support, for example, in steps 802 and 804 (Fig. 8) and the recited identified term finds support, for example, in the word "swim" 260 (Fig. 2; paragraph [0062] of the specification as filed). The recited specified text finds support, for example, in the sentence "I went swim Saturday" (Fig. 2). The step of retrieving information on the network related to the specified text finds support, for example, in step 814 (Fig. 8). The recited step of disambiguating the identified term in the information retrieved finds support, for example, in step 818 (Fig. 8).

Regarding claim 20, the recited article of manufacture for use in a machine finds support, for example, in paragraphs [0094]-[0097] and original claim 20. The recited memory finds support, for example, in the databases 118 and more specifically in the scenario database 134 (Fig. 1; paragraph [0033] of the specification as filed). The recited instructions stored in the memory find support in paragraphs [0095]-[0096] and original claim 20. The recited scenario having tasks to be carried out in the language finds support, for example, in frame 202 (Fig. 2; paragraph [0039] of the specification as filed). The recited accepting one or more simultaneous connections requested over the network from one or

more user systems finds support, for example, in paragraph [0044] of the specification as filed. The recited representing the scenario in a physical setting in a user interface finds support, for example, in Fig. 2. The recited providing at least one channel finds support, for example, in the communication tool 210 (Fig. 2; paragraph [0040] of the specification as filed). The recited receiving and disambiguating an identified term in specified text finds support, for example, in steps 802 and 804 (Fig. 8) and the recited identified term finds support, for example, in the word "swim" 260 (Fig. 2; paragraph [0062] of the specification as filed). The recited retrieving information on the network related to the specified text finds support, for example, in step 814 (Fig. 8). The recited disambiguating the identified term in the information retrieved to identify example uses having a meaning similar to the identified term in the specified text finds support, for example, in step 818 (Fig. 8).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

- 1) Claims 1-7 and 10-20 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 6,866,510 to Polanyi in view of U.S. Patent No. 6,234,802 to Pella, and further in view of U.S. Patent No. 6,741,833 to McCormick.
- 2) Claims 8-9 are rejected under 35 U.S.C. §103(a) over Polyani in view of Pella and McCormick, and further in view of U.S. Patent No. 7,043,438 to Murakami.

VII. ARGUMENT

Regarding independent claims 1 and 19-20, Polanyi fails to disclose the structure, or corresponding steps or instructions, of: (1) a memory storing a scenario having tasks to be carried out in the language; (2) a connection manager able to support multiple simultaneous connections from other user systems; (3) a virtual reality subsystem; and (4) a communication subsystem providing at least one channel in which users can communicate.

Polanyi discloses a second language writing skills instruction system 100 for enabling a user to learn a written culture (col. 1, lines 38-43), such as expository writing (col. 3, lines 62-64). In operation, a user loads writing the user has previously composed (user text) from text storage memory 170 into memory 120 (col. 3, lines 10-14). The user text is segmented into "text building units", analyzed, and a structural representation is built (col. 3, lines 14-25). This structural representation is compared to stored structural representations of discourse, and then differences are noted (col. 3, lines 26-38). The differences are compared to previously identified flaws stored in the system (col. 3, lines 30-34). A more "appropriate" structural representation is then retrieved and presented to the user (col. 3, lines 38-55) so that the user can improve his or her second language writing skills in the identified writing culture.

Polanyi fails to disclose features (1)-(4) above of a memory storing scenarios, a connection manager able to support a plurality of simultaneous connections, a virtual reality subsystem, and a communications subsystem allowing users to communicate because Polanyi discloses a standalone system that receives prepared writing samples, analyzes the received samples, and provides user feedback.

A. Pella Fails To Cure The Deficiencies Of Polanyi

Pella fails to cure the deficiencies of Polanyi because (1) one of ordinary skill would not have modified the system of Polanyi to include the 3-D graphical representation of Pella;

and (2) even if Polanyi and Pella are combined as proposed, the proposed combination fails to disclose (a) a connection manager able to accept one or more simultaneous connections from other user systems; and (b) a communication subsystem for providing at least one channel over which users can communicate.

Pella discloses a system for teaching and evaluating user comprehension of spoken language by verbally challenging the user (col. 9, lines 38-41) within an interactive 3-D (three dimensional) graphical representation of an environment on a personal computer 20 (Fig. 9). In operation, a user interacts in the environment with other "people" (persons 94) controlled by the system (Fig. 4), which challenge the user with verbal questions and tasks requiring responses (col. 9, lines 58-64). A speech recognition system interprets the responses and acknowledges correct responses (col. 9, lines 6-19). Pella fails to disclose that any interaction can exist between different personal computers 20.

1. **There Is No Motivation To Combine Polanyi And Pella As Proposed Because Modifying Polanyi As Proposed Would Provide No Benefit And Would Render The System Of Polanyi Unsuitable For Its Intended Purpose.**

One of ordinary skill in the art would not have been motivated to combine the interactive capabilities of Pella with the system 100 of Polanyi. Polanyi is directed to helping users improve their writing abilities within a writing culture such as expository writing. In Polanyi, users compose writing pieces prior to using the system of Polanyi, and only when finished, input their writing to the system of Polanyi for analysis and critique. In contrast, Pella is directed to helping users improve verbal interaction skills (both speaking skills and verbal understanding skills). Thus, in Pella, users interact in real time with the persons 94 (to practice interaction skills) and are given spoken questions and tasks to which the users verbally respond.

Writing compositions are generally created over longer periods of time than verbal interaction. Thus, one of ordinary skill in the art would not have been motivated to combine the disclosures of Polanyi and Pella because adding a virtual reality environment with interaction and tasks to perform would have no benefit to a system designed to teach a writing culture and would be incompatible with the Polanyi system, which receives a pre-written input.

Further, the Office Action's asserted reason for the proposed combination, "to provide a more realistic setting and improve the learning experience of the user" does not make sense. If Polanyi is modified by Pella as proposed, the resultant system would be the writing analysis system 100 of Polanyi modified to have a virtual reality environment in which the user would be presented verbal tasks and questions as disclosed by Pella. This combination fails to make any technical or educational sense. The purpose of Pella is completely different from the purpose of Polanyi. The proposed combination can only be explained by the Office Action's reliance on the Applicant's claims as a roadmap by which prior art elements are selected and combined without regard to what one of ordinary skill in the art would have been motivated to do. This constitutes impermissible hindsight.

A user composes his or her writing composition before using Polanyi's system and uses Polanyi's system by providing it with a finished writing piece (user text). Because the user's writing has been completed prior to the use of Polanyi's system, adding the virtual reality system of Pella will provide no benefit to the user of Polanyi's system because the user would not even use the system of Polanyi until the user's written work is finished. Alternatively, even if the user composes his or her writing on the system of Polanyi (something not disclosed by Polanyi), a virtual environment with verbal interaction, commands, and tasks would detract the user from composing his or her writing with no

attendant benefit, thus causing the system of Polanyi to be unsuitable for its intended purpose in violation of MPEP §2143.01(V).

2. Even If Polanyi And Pella Are Combined, All Of The Claimed Features Would Not Result

Regarding independent claims 1 and 19-20, even if Polanyi and Pella are combined as proposed, the proposed combination fails to disclose the structure, or corresponding steps or instructions, of: (1) "a connection manager able to accept one or more simultaneous connections requested over the network from one or more user systems"; and (2) "a communication subsystem for providing at least one channel over which user of two or more of the user systems can communicate text to each other when carrying out the tasks in the language".

The proposed combination fails to disclose these features because Polanyi, in which a single user submits previously composed writing samples for analysis and critique, and Pella, in which a single user practices every day verbal skills by verbally responding to tasks and answering questions presented by the system, both fail to disclose or suggest allowing multiple users to interact with the same system at the same time (feature (1) above) or allowing multiple users to communicate with one another (feature (2) above).

B. McCormick Fails To Cure The Deficiencies Of Both Polanyi Alone And Polanyi And Pella If Combined As Proposed

1. Polanyi

McCormick fails to cure the deficiencies of the Polanyi because one of ordinary skill would not have been motivated to combine the disclosure of McCormick with that of Polanyi.

McCormick discloses a system 2 for teaching foreign languages by presenting users (players 40) with games and cooperative assignments (col. 3, lines 64 to col. 4, line 2). The system 2 has a learning activity platform having chat displays 88 (for player 1) and 88' (for player 2) (Fig. 2) allowing communication between players. In operation, each player 40

selects a desired learning activity (Fig. 3, step 104) and must wait until he or she is matched with other players 40 (col. 8, lines 18-21). Once matches are made between players 40, one or more communication channel is provided by which the players 40 can communicate during completion of the learning activity (col. 8, lines 30-34).

McCormick is directed to an interactive system that requires interaction and cooperation between players, wherein players play multiplayer games or cooperate in collaborative assignments in real time in order to learn a foreign language. In contrast, Polanyi's system is directed to a writing analysis system 100 for which a user composes a writing piece off-line before using the system of Polanyi, and when finished, submits the writing piece to have it analyzed and critiqued within a writing culture. A user submitting a writing piece to the system of Polanyi for analysis and critique would already be finished with his or her writing, and thus would have no benefit of an interactive system such as that of McCormick because the user would be finished with his or her part (the composition of the writing piece) before using the system of Polanyi. Thus, one of ordinary skill in the art would not have been motivated to combine the communication capabilities of McCormick with the system of Polanyi.

Alternatively, even if the user composes his or her writing on the system of Polanyi (something not disclosed by Polanyi), modifying the system of Polanyi to mandate participation on the part of the user in an interactive, collaborative game as disclosed by McCormick would detract the user from composing his or her writing with no attendant benefit, thus causing the system of Polanyi to be unsuitable for its intended purpose in violation of MPEP §2143.01(V).

2. Polanyi In View Of Pella

Even if Polanyi and Pella are combined as proposed, McCormick fails to cure the deficiencies of Polanyi and Pella because one of ordinary skill in the art would not have combined the teachings of McCormick with that of Polanyi as modified by Pella.

If Polanyi is modified by Pella as proposed, the resultant system would be the writing analysis system 100 of Polanyi modified to have a virtual reality environment in which the user would be presented with verbal tasks and questions by the system in the form of video playback (col. 4, lines 49-55), as disclosed by Pella. Whether having his or her writing analyzed by the capabilities of the original Polanyi system or responding to the verbal tasks and questions of the added virtual reality system as taught by Pella, a user in the proposed Polanyi-Pella combination would be acting alone and would be provided an analysis and critique of his or her writing skills or language skills. In contrast, McCormick discloses a system 2 in which players 40 are matched with other players 40 in order to interactively and cooperatively complete games and assignments. Thus, in the proposed combination of Polanyi and Pella, a user acts alone and has his or her efforts analyzed and critiqued, the user learning by being provided the analysis, critique, or corrected errors whereas in McCormick, a player 40 interacts with other players 40 to cooperatively achieve a goal, the player 40 learning by the actual interaction in achieving the goal. Because the proposed combination of Polanyi and Pella operate by a user acting alone and provide feedback in response to the user's actions, whereas McCormick requires that players 40 interact with each other, the interaction itself providing the learning to the players 40, one of ordinary skill would not have been motivated to combine the references as proposed.

VIII. CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that claims 1-20 are in condition for allowance. For all of the above reasons, Appellants respectfully request this Honorable Board to reverse the rejections of claims 1-20.

Respectfully submitted,



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APPENDIX A - CLAIMS APPENDIX

CLAIMS INVOLVED IN THE APPEAL:

1. A system operating on a network for learning a language, the system comprising:
 - a memory for storing a scenario having tasks to be carried out in the language;
 - a connection manager able to accept one or more simultaneous connections requested over the network from one or more user systems;
 - a virtual reality subsystem for representing the scenario in a physical setting in a user interface operating on each user system connected to the learning system;
 - a communication subsystem for providing at least one channel over which users of two or more of the user systems can communicate text to each other when carrying out the tasks in the language;
 - a set of linguistic tools for receiving and disambiguating an identified term in specified text received from one of the connected user systems; and
 - a search subsystem for retrieving information on the network related to the specified text;wherein the set of linguistic tools disambiguates the identified term in the information retrieved by the search subsystem to identify example uses having a meaning similar to the identified term in the specified text to aid the users of the user systems to comprehend the text communicated in the language over the at least one channel.
2. The system according to claim 1, wherein each user of the learning system is assigned an account with a profile to access the learning system from their user system operating on the network.

3. The system according to claim 2, wherein the search system selects information sources and filters search results using the profile of the users operating the user systems connected to the learning system.
4. The system according to claim 2, wherein the scenario is customized in accordance with the profile of the users operating the user systems connected to the learning system.
5. The system according to claim 1, further comprising a language guesser for filtering out text communicated using the communication subsystem that is other than in the language.
6. The system according to claim 1, further comprising a language guesser for filtering out search results that are other than in the language.
7. The system according to claim 1, wherein one of the set of linguistic tools measures a language level of text communicated over the at least one channel.
8. The system according to claim 7, wherein a user identified as a tutor is warned when the measure of social behavior over the at least one channel is below a predefined minimum level.
9. The system according to claim 7, wherein the communication subsystem filters text over the at least one channel having a measured social behavior below a predefined minimum level.
10. The system according to claim 1, wherein the set of linguistic tools disambiguates the identified term in the information retrieved by the search subsystem to identify example uses having a meaning dissimilar to the identified term in the specified text.
11. The system according to claim 1, further comprising a recommender subsystem for receiving recommendations from and distributing those recommendations to selected ones of the users operating the user systems connected to the learning system.

12. The system according to claim 1, wherein the communication subsystem invokes a chat window on the user interface on each user system connected to the learning system for displaying text communicated by users that are proximate to each other in the representation of the physical setting.

13. The system according to claim 1, wherein the set of linguistic tools comprises one or more of a spell checker, a thesaurus, a morphological analyzer, a contextual disambiguator, a sense disambiguator, and term extractor.

14. The system according to claim 1, further comprising a converter for converting audio to text for transmission over the communication subsystem.

15. The system according to claim 1, wherein the set of linguistic tools sense disambiguates the identified term in the specified text.

16. The system according to claim 1, wherein the set of linguistic tools syntactically disambiguates the identified term in the specified text.

17. The system according to claim 1, further comprising a session database for recording session history of the tasks of the scenario carried out by the users operating the user systems connected to the learning system.

18. The system according to claim 17, wherein the session history provides a measure of one of user language ability and user capacity for carrying out assigned tasks.

19. A method for learning a language using a system operating on a network, the method performed at the system comprising:

storing in a memory a scenario having tasks to be carried out in the language;

accepting one or more simultaneous connections requested over the network from one or more user systems;

representing the scenario in a physical setting in a user interface operating on each user system connected to the learning system;

providing at least one channel over which users of two or more of the user systems can communicate text with each other when carrying out the tasks in the language;
receiving and disambiguating an identified term in specified text received from one of the connected user systems; and
retrieving information on the network related to the specified text;
wherein said receiving and disambiguating further comprises disambiguating the identified term in the information retrieved to identify example uses having a meaning similar to the identified term in the specified text to aid the users of the user systems to comprehend the text communicated in the language over the at least one channel.

20. An article of manufacture for use in a machine comprising:

a) a memory;

b) instructions stored in the memory for operating a system on a network for learning a language, the instructions being machine readable by the system and performing a method, the method comprising:

storing in a memory a scenario having tasks to be carried out in the language;

accepting one or more simultaneous connections requested over the network from one or more user systems;

representing the scenario in a physical setting in a user interface operating on each user system connected to the learning system;

providing at least one channel over which users of two or more of the user systems can communicate text with each other when carrying out the tasks in the language;

receiving and disambiguating an identified term in specified text received from one of the connected user systems; and

retrieving information on the network related to the specified text;

wherein said receiving and disambiguating further comprises disambiguating the identified term in the information retrieved to identify example uses having a meaning similar to the identified term in the specified text to aid the users of the user systems to comprehend the text communicated in the language over the at least one channel.

APPENDIX B - EVIDENCE APPENDIX

NONE

APPENDIX C - RELATED PROCEEDINGS APPENDIX

NONE